

**Notice of Allowability**

Application No.

09/759,774

Examiner

Brian D. Nguyen

Applicant(s)

RAKIB ET AL.

Art Unit

2661

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 10/18/04.
2. ☒ The allowed claim(s) is/are 84-88, 90, 89, and 91-99 (renumbered 1-16, respectively).
3. ☒ The drawings filed on 12 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 4/23/01
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 07252005.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
7/26/05

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Khaled Shami on 7/25/05.

3. The application has been amended as follows:

#### **In the specification**

At page 1, replace the first paragraph with the following paragraph:

--This application is a continuation-in-part application of U.S. patent application Serial No. 08/684,243, filed July 19, 1996, now U.S. Patent No. 6,356,555, issued March 12, 2002, invented by Shlomo Rakib and Yehuda Azenkot which was a continuation-in-part application of U.S. patent application Serial No. 08/588,650, filed January 19, 1996, now U.S. Patent No. 5,793,759, issued August 11, 1998, invented by Shlomo Rakib and Yehuda Azenkot, which was a continuation-in-part application of U.S. patent application Serial No. 08/519,630, filed Aug. 25, 1995, invented by Shlomo Rakib and Yehuda Azenkot, now U.S. Patent No. 5,768,269, issued June 16, 1998, the contents of all of which are hereby incorporated by reference. This application is also a continuation-in-part application of a U.S. patent application entitled LOWER OVERHEAD METHOD FOR DATA TRANSMISSION USING ATM AND SCDMA OVER HYBRID FIBER COAX CABLE PLANT, Serial No. 08/760,412, filed December 4, 1996, now U.S. Patent No. 5,991,308, issued November 23, 1999, invented by

Art Unit: 2661

Amir Fuhrmann, Shlomo Rakib and Yehuda Azenkot, ~~now co-pending~~, the entirety of which is hereby incorporated by reference.--

At page 136, line 16, after “simultaneously transmitted.”, insert --When the RU sends training data, it sets tap coefficients of its precode equalization filter such as filter 563 in Figure 33 to values that cause the precode equalization filter to not predistort the training data signal.--

At page 136, line 29, delete the sentence “The RU then sets these final tap weight coefficients into FFE and DFE equalizers within the precode equalization filter 563 in the transmitter of Figure 33, as symbolized by step 1124.” and substitute, --To calculate the new coefficients for the precode equalization filter 563 in the RU transmitter of Figure 33, the old coefficients of the RU precode filter FFE and DFE equalization filter are convolved with the new coefficients FFE and DFE coefficients which the central unit modem symbol equalizer circuit converged on to derive new coefficients. These new coefficients are then set into the RU precode filter.--

At page 137, line 6, delete “tap weight coefficients of FFE and DFE” and substitute --the main tap of said FFE equalizer 921 in Figure 50 to one and sets the side tap coefficients of the FFE equalization filter 921 and the DFE equalization filter 929 in Figure 50 to zero--. At line 7, delete “equalizers 765 and 820, respectively to one”.

At page 137, lines 29 through 32, delete the sentence “After convergence, the RU CPU reads the final tap weight coefficients for the FFE equalizer 765 and the DFE equalizer 820 via bus 833 and, in this alternative embodiment, sends these tap weight coefficients to the FFE/DFE circuit 764 in the RU receiver of Figure 30 via bus 822, as symbolized by step 1132.” and substitute the following --After convergence, the RU CPU reads the final tap weight coefficients

Art Unit: 2661

for the FFE equalizer 765 and the DFE equalizer 820 via bus 833 and calculates new tap weight coefficients for the FFE and DFE filters of the CE circuit 764 in the RU receiver of Figure 30 by convolving the old CE filter tap weights with the FFE and DFE filter tap coefficients converged upon by the SE circuit during reception of multiple bursts of training data, and loads these newly calculated tap weight coefficients into the FFE and DFE filters of CE circuit 764 in the RU receiver of Figure 30 via bus 844, as symbolized by step 1 132 of Figure 53C.--.

At page 160, line 20, delete "1502" and substitute --1501--.

At page 160, line 24 , delete "1504" and substitute --1507--.

At page 160, line 32, delete "1506" and substitute --1509--.

At page 161, line 1 , delete "1508" and substitute --1511--.

At page 161, line 2, delete "1510" and substitute --1513--.

At page 161, line 11, delete "1512" and substitute --1515--.

At page 161, line 6, delete "1516" and substitute --1517--.

At page 161, line 13, delete "1514" and substitute --1519--.

At page 161, line 15, after "." and before "Then", insert --The main tap coefficient of the SE feed forward equalization filter is then set to one and the side tap coefficients of the SE feed forward and decision feedback equalization filters are set to zero for receipt of payload data.--

At page 177, delete the entire paragraph that extends from line 21 to line 25.

#### **In the claims**

Claim 87, line 3, replace "transceiver" with --transceivers--. In line 36, delete "so".

Claim 96, line 22, replace "a control channel" with --said control channel--. In line 26, after "a predetermined number" insert --of selected gaps between frames of a multiple frame

Art Unit: 2661

authentication interval--. In line 27, after “than all of” insert --gaps between-- and replace “a multiple frame authentication interval” with --**the** multiple frame authentication interval--. In line 38, after “correct number of” insert --ranging pulses during said--. In line 42, replace “said identity” with --an identity--. In line 43, delete “so”.

Claim 98, line 12, after “status”, insert --signal--. In line 15, replace “a central unit” with --**said** central unit--.

Claim 99, line 16, replace “ranging pulses” with --selected gaps--. In line 22, insert --correct-- between “a predetermined” and “number of ranging pulses”. In line 24, after “said predetermined correct number of” insert --ranging pulses during said--. In line 28, replace “**said** identity **so** found” with --**an** identity found--.

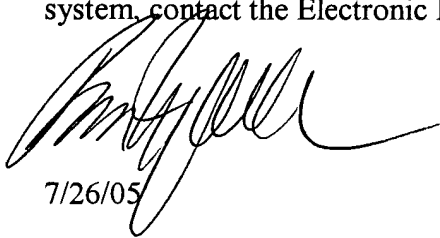
### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'B. Nguyen', with a long horizontal flourish extending to the right.

7/26/05

**BRIAN NGUYEN  
PRIMARY EXAMINER**